IN THE CLAIMS:

Please amend claims 17-19, 21, 23, 25, 26, 29-31 as follows.

Claims 1-16 (Canceled)

17. (Currently Amended) A method for determining the location and/or orientation of an object in a predetermined coordinate system, in which method in the object there is arranged a set of signal sources in a known manner in relation to the co-ordinate system of the object, ~~and in which~~ the method comprising:

transmitting a predetermined signal from the signal sources,

receiving the signal transmitted from the signal sources with a receiver which comprises signal receivers, ~~and~~

computing the location and/or orientation of the object based on ~~the~~ received amplitudes of the signals, ~~wherein~~

determining the amplitudes of the received signals, said amplitudes being independent of each other, by computationally taking into account the correlation between the transmitted signals, said transmitted signals being transmitted simultaneously and having arbitrary waveforms,

determining each signal source separately from the independent amplitudes, and

computing the location and/or orientation of the object at the time interval being examined based on the independent amplitude distributions associated with the signal sources by adjusting ~~the~~ numerical amplitudes of the signal sources to the received amplitudes measured using the receiver, said adjusting the numerical amplitudes performed by setting the geometrical free parameters of the signal sources and/or of the receiver to values by which the difference between the calculated and measured amplitude distributions is at its smallest.

18. (Currently Amended) The method according to claim 17, wherein

computing the location and/or orientation of the signal sources in the co-ordinate system of both the object and the ~~measuring device~~ receiver from values set to free parameters, and

computing the location and/or orientation of the object in relation to the receiver by using known locations of the signal sources.

19. (Currently Amended) The method according to claim 18, wherein in order to determine an individual signal source:

generating the product of a signal to be estimated for each signal specifically and of a signal received by ~~a~~ the receiver,

integrating the products over a predetermined time T in order to obtain a preliminary result for the measured amplitudes sent by the signal sources, and

generating the product of the preliminary result and of the correction coefficient, in which the correction coefficient is a quantity describing the correlation between the signals sent from different signal sources, in order to obtain the amplitude of the received signal for each signal specifically.

20. (Previously Presented) The method according to claim 18, wherein

generating the product of the signal to be estimated, of the correction efficient and of the received signal, in which the correction coefficient is a quantity describing the correlation between the signals sent from different signal sources, and

integrating the products over a predetermined time T in order to obtain a measuring result for the measured amplitudes of the signals sent by the signal sources.

21. (Currently Amended) The method according to claim 18, wherein

generating the signal product of the signal to be estimated and ~~of the~~ a chosen coefficient,

generating the product of the received signal product and of the received signal,

generating the products of the obtained signal product and of the received signal,

integrating the products over a predetermined time T in order to obtain a preliminary result for the measured amplitudes of the signals sent by the signal sources, and

generating the product of the preliminary ~~measuring~~ result and of ~~the~~ a correction coefficient, in which the correction coefficient is a quantity describing the correlation between the signals sent from different signal sources and the effect of the chosen coefficient, in order to obtain the amplitude of the received signal for each signal specifically.

22. (Previously Presented) The method according to claim 19, wherein the products are accentuated by a window function w.

23. (Currently Amended) The method according to claim 17, ~~wherein~~ further comprising

sending a signal in a sine form from the signal sources, and ~~that~~

using in the computation as the estimated signal a signal of almost the same form as the sent signal.

24. (Previously Presented) The method according to claim 23, wherein using in the computation a second signal being at the same frequency with the sent signal that has a difference in phase in relation to the estimated signal.

25. (Currently Amended) The method according to claim 17, ~~wherein~~ further comprising

receiving useful signal by means of ~~a~~ the receiver, and

filtering~~, by means of the signal source,~~ the sent signals ~~form~~ from the useful signal by the signal source.

26. (Currently Amended) The method according to claim 17, ~~wherein~~ further comprising

estimating signals that correspond to the signals of the signal sources attached to a moving object in a predetermined manner for estimating the motion of the object.

27. (Previously Presented) The method according to claim 17, wherein the determination of the location and/or orientation of the object is repeated in order to determine the relative location of the object by repeating temporally overlapping measuring periods.

28. (Previously Presented) The method according to claim 22, wherein using signal forms of known sources of interference as the estimated signal.

29. (Currently Amended) The method according to claim 17, ~~wherein~~ further comprising

generating a ~~return-switching~~ feedback from the obtained amplitudes to the signal sources, and

controlling the transmission power of the signal sources by means of the feedback ~~return switching~~.

30. (Currently Amended) The method according to claim 17, ~~wherein~~ further comprising

subtracting the signals computed at the ~~measured~~ received signals, and

specifying ~~the~~ a measuring result by means of ~~the~~ a remaining signal.

31. (Currently Amended) The method according to claim 17, ~~wherein~~ further comprising

estimating ~~one or more signals~~ at least one signal that differ from the signals of the signal sources or from those of the known sources of interference, and

specifying the location result based on the obtained measuring result.